

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. - 7. (Cancelled)

8. (Currently Amended) A blank for the manufacture of a dental model fabricated from a partially sintered castable or investment refractory ceramic material comprising a refractory filler and a bonding agent wherein the partially sintered ceramic material is sintered to less than about 92% of theoretical full density.

9. (Previously Presented) The blank of claim 8 wherein the partially ceramic material is sintered to less than about 80% of theoretical full density.

10. (Previously Presented) The blank of claim 8 wherein the partially sintered ceramic material is sintered to less than about 75% of theoretically full density.

11. (Previously Presented) The blank of claim 8 having a flexural strength in the range from about 1 to about 75 MPa.

12. (Previously Presented) The blank of claim 8 having a flexural strength in the range from about 3 to about 20 MPa.

13. – 16. (Canceled)

17. (Withdrawn) A method for making a dental restoration comprising: milling a dental model from a partially sintered ceramic material; applying dental material thereon; and curing the dental material on the model to obtain a dental restoration.

18. (Withdrawn) The method of claim 17 wherein the curing process comprises sintering, light curing, or heat curing.

19. (Withdrawn) The method of claim 17 wherein the dental material comprises a metal material, a ceramic material, a composite material or mixtures thereof.

20. (Withdrawn) The method of claim 19 wherein the metal material comprises a single metal or an alloy of two or more metals.

21. (Withdrawn) The method of claim 19 wherein the metal material comprises metal powder in combination with a binder.

22. (Withdrawn) The method of claim 21 wherein the metal powder in combination with the binder is in the form a sheet.

23. (Withdrawn) The method of claim 19 wherein the metal material is in the form of a foil.

24. (Withdrawn) The method of claim 19 wherein the ceramic material comprises porcelain.

25. (Withdrawn) The method of claim 19 wherein the ceramic comprises a high-strength material.

26. (Withdrawn) The method of claim 19 wherein the composite material comprises a material selected from a particulate-reinforced polymeric material, a fiber-reinforced polymeric material and mixtures Thereof.

27. (Withdrawn) The method of claim 17 wherein one or more layers of material are applied on the dental restoration.

28. (Withdrawn) The method of claim 27 wherein the one or more layers of material comprises a material selected from the group consisting of a porcelain or composite material.

29. (Withdrawn) A method for making a dental restoration comprising:
obtaining data of a patient's tooth;
milling a dental model from a partially sintered ceramic material based on the data obtained from the patient's tooth.

30. (Withdrawn) The method of claim 29 wherein the data obtained from the patient's tooth is acquired by photographing the patient's tooth.

31. (Withdrawn) The method of claim 29 wherein the data obtained from the patient's tooth is acquired by scanning the patient's tooth.

32. (Withdrawn) The method of claim 29 further comprising:
applying dental material onto the model; and
heating the model and dental material thereon to obtain a dental restoration.

33. (Withdrawn) A method of making a blank for the manufacture of dental model comprising:

forming a mixture comprising a refractory material and a binder into a shape; and partially sintering the formed shape.

34. (Withdrawn) The method of claim 33 wherein the refractory material comprises one or more materials selected from the group consisting of alumina, zirconia, magnesia, zircon, aluminosilicate, cordierite, mica, quartz, cristobolite, silica, silicon nitride, silicon carbide, leucite, silica-alumina-nitrides, mullite, garnet, or mixtures thereof.

35. (Withdrawn) The method of claim 33 wherein the binder comprises an inorganic material, an organic material, or mixtures thereof.

36. (Withdrawn) The method of claim 33 wherein the organic material comprises polyvinyl pyrrolidine, polyvinyl alcohol, polyvinyl acetate, polyvinyl chloride, polyvinyl butryal and polystyrene, or mixtures thereof.

37. (Withdrawn) The method of claim 33 wherein the inorganic material comprises magnesium oxide, ammonium phosphate, colloidal silica, calcium sulfate, magnesium phosphate, alkaline silicates, silica hydrosol, colloidal clays, and mixtures thereof.

38. (Withdrawn) The method of claim 33 wherein the partially sintering step is conducted at a temperature to provide a partially sintered ceramic material having a density less than about 92% theoretical full density.

39. (Withdrawn) The method of claim 33 wherein the partially sintering step is conducted for a time to provide a partially sintered ceramic material having a density less than about 92% theoretical full density.

40. (Withdrawn) The method of claim 33 wherein the partially sintering step is conducted at a temperature to provide a partially sintered ceramic material having a density less than about 80% theoretical full density.

41. (Withdrawn) The method of claim 33 wherein the partially sintering step is conducted for a time to provide a partially sintered ceramic material having a density less than about 80% theoretical full density.

42. (Withdrawn) The method of claim 33 wherein the partially sintering step is conducted at a temperature to provide a partially sintered ceramic material having a density less than about 75% theoretical full density.

43. (Withdrawn) The method of claim 33 wherein the partially sintering step is conducted for a time to provide a partially sintered ceramic material having a density less than about 75% theoretical full density.

44. (New) The blank of claim 8, wherein the castable or investment refractory material comprises up to about 80% of the refractory filler.

45. (New) The blank of claim 44, wherein the refractory filler comprises quartz, cristobolite, silica, leucite, zirconia hafnia, zircon, magnesia, aluminosilicate, cordierite, mica or mixtures thereof.

46. (New) The blank of claim 8, wherein the bonding agent comprises gypsum, phosphate, or ethyl silicate.